DATA SHEET

CELSIUS M470

Issue: **September 2009**

Your new “thoroughbred” workstation

CELSIUS M470

The CELSIUS M Series is the single-processor platform with a particularly well-balanced ratio between price and performance. The CELSIUS M470 incorporates the latest advances in performance technologies enabling you to meet increasingly demanding schedules using professional applications such as CAD/CAE, virtual reality and finance.

Performance

Higher productivity

- High performance multi-core processors, hard disk drives and next generation graphics subsystems

Ergonomics

Quiet system for a pleasant working environment

- Optimized thermal management, low-noise chassis and silent fans

Reliability

System stability for the complete lifecycle

- High product standards thanks to top-quality components and comprehensive testing in certified in-house laboratories for 24/7 operation

Certification of workstation applications

Stability, compatibility and performance for the main workstation applications

- Comprehensive support for ISV applications and ease of integration into existing IT networks

Expandability

Excellent expandability for future demands

- Increased memory capacities of up to 24 GB

Green IT · 4 CORE PERFORMANCE · PROFESSIONAL GRAPHICS · ISV CERTIFICATION · MULTI DISPLAY SUPPORT · INFORMATION DISPLAY · QUIET RUNNING · RACK MOUNTABLE

Components

Processor	Intel® Xeon® X5570 (2.93 GHz, 8 MB, 6.4 GT/s)
	Intel® Xeon® X5560 (2.8 GHz, 8 MB, 6.4 GT/s)
	Intel® Xeon® X5550 (2.66 GHz, 8 MB, 6.4 GT/s)
	Intel® Xeon® W5590 (3.33 GHz, 8 MB, 6.4 GT/s)
	Intel® Xeon® W5580 (3.2 GHz, 8 MB, 6.4 GT/s)
	Intel® Xeon® W3580 (3.33 GHz, 8 MB, 6.4 GT/s)
	Intel® Xeon® W3570 (3.2 GHz, 8 MB, 6.4 GT/s)
	Intel® Xeon® W3550 (3.06 GHz, 8 MB, 4.8 GT/s)
	Intel® Xeon® W3540 (2.93 GHz, 8 MB, 4.8 GT/s)
	Intel® Xeon® W3520 (2.66 GHz, 8 MB, 4.8 GT/s)
	Intel® Xeon® W3505 (2.53 GHz, 8 MB, 4.8 GT/s)
	Intel® Xeon® W3503 (2.5 GHz, 8 MB, 4.8 GT/s)
	Intel® Xeon® L5530 (2.40 GHz, 8 MB, 5.86 GT/s)
	Intel® Xeon® L5520 (2.26 GHz, 8 MB, 5.86 GT/s)
	Intel® Xeon® L5506 (2.13 GHz, 4 MB, 4.8 GT/s)
	Intel® Xeon® E5540 (2.53 GHz, 8 MB, 5.86 GT/s)
	Intel® Xeon® E5530 (2.4 GHz, 8 MB, 5.86 GT/s)
	Intel® Xeon® E5520 (2.26 GHz, 8 MB, 5.86 GT/s)
	Intel® Xeon® E5506 (2.13 GHz, 4 MB, 4.8 GT/s)
	Intel® Xeon® E5504 (2.0 GHz, 4 MB, 4.8 GT/s)
	Intel® Xeon® E5502 (1.86 GHz, 4 MB, 4.8 GT/s)
Memory modules	4 GB (1 module 4 GB) DDR3-SDRAM, unbuffered, ECC, 1333 MHz, PC3-10600
	2 GB (1 module 2 GB) DDR3-SDRAM, unbuffered, ECC, 1333 MHz, PC3-10600
	1 GB (1 module 1 GB) DDR3-SDRAM, unbuffered, non-ECC, 1066 MHz, PC3-8500
	1 GB (1 module 1 GB) DDR3-SDRAM, unbuffered, ECC, 1333 MHz, PC3-10600
Graphics add on cards (optional)	Remote Graphics: CELSIUS RemoteAccess Card, , PCIe x1, 2x DVI-I
	GPU computing card: NVIDIA® Tesla C1060, 4 GB, PCIe x16, -
	Ultra-high-end 3D: Second NVIDIA® Quadro FX 5800, 4 GB, PCIe x16, 2x DVI-I, DP
	Ultra-high-end 3D: Second NVIDIA® Quadro FX 4800, 1.5 GB, PCIe x16, 1x DVI-I, 2x DP
	Ultra-high-end 3D: NVIDIA® Quadro FX 5800, 4 GB, PCIe x16, 2x DL-DVI-I, DP
	Ultra-high-end 3D: NVIDIA® Quadro FX 4800, 1.5 GB, PCIe x16, 2x DL-DVI-I, 2x DP
	High-end 3D: NVIDIA® Quadro FX 3800, 1024 MB, PCIe x16, DL-DVI-I, 2x DP
	High-end 3D: ATI FirePro™ V7750, 1024 MB, PCIe x16, 2x DP, 1x DVI-I
	Midrange 3D: NVIDIA® Quadro FX 1800, 768 MB, PCIe x16, DL-DVI-I, 2x DP
	Midrange 3D: NVIDIA® Quadro FX 580, 512 MB, PCIe x16, DL-DVI-I, 2x DP
	Midrange 3D: ATI FirePro™ V5700, 512 MB, PCIe x16, DL-DVI-I, 2x DP
	Entry 3D: NVIDIA® Quadro FX 380, 256 MB, PCIe x16, 2x DL-DVI-I
	Entry 3D: ATI FirePro™ V3700, 256 MB, PCIe x16, 2x DL-DVI-I
	Multi monitor 2D: NVIDIA® Quadro NVS 450, 512 MB, PCIe x1, 4x SL DVI-I
	Multi monitor 2D: NVIDIA® Quadro NVS 290, 256 MB, PCIe x1, 2 x SL DVI-I
	Professional 2D: NVIDIA® Quadro NVS 290, 256 MB, PCIe x16, 2 x SL DVI-I
Hard disk drives (internal)	SATA II, 10000 rpm, 300 GB, 2.5-inch, S.M.A.R.T.
	SATA II, 10000 rpm, 150 GB, 2.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 1000 GB, 3.5-inch, S.M.A.R.T. business critical
	SATA II, 7200 rpm, 1000 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 750 GB, 3.5-inch, S.M.A.R.T. business critical
	SATA II, 7200 rpm, 500 GB, 3.5-inch, S.M.A.R.T. business critical
	SATA II, 7200 rpm, 500 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 320 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 250 GB, 3.5-inch, S.M.A.R.T.
	SAS, 15000 rpm, 450 GB, 3.5-inch
	SAS, 15000 rpm, 300 GB, 3.5-inch
	SAS, 15000 rpm, 146 GB, 3.5-inch

Hard disk notes	2.5-inch drives will be mounted in the 3.5-inch bays One Gigabyte equals one billion bytes, when referring to hard disk drive capacity.
Drives (optional)	Blu-ray Disc Triple Writer
	DVD-ROM
	DVD Super Multi
	MultiCard Reader 15in1, 3,5-Inch
SAS Controller (optional)	LSI 1064e, 0,1, 4 ports
Interface add on cards/components (optional)	
	WLAN III, 802.11g/Draft-n (Windows only)
	Gigabit Ethernet PCIe x1
	eSATA Interface
	Dual serial card, PCI, EX-43092

Base unit	**CELSIUS M470**	**CELSIUS M470 power**
Mainboard		
Mainboard type	D2778	D2778
Formfactor	ATX	ATX
Chipset	Intel® X58 Express, Intel® 82801JR ICH10R	Intel® X58 Express, Intel® 82801JR ICH10R
Processor socket	LGA 1366	LGA 1366
Processor quantity maximum	1	1
Memory slots	6 DIMM	6 DIMM
Supported capacity RAM (max.)	24 GB	24 GB
Memory notes	For combinations of 32-bit operating systems with 3 GB of memory or above the accessible memory may be reduced to 3 GB or less (depending on system configuration).	For combinations of 32-bit operating systems with 3 GB of memory or above the accessible memory may be reduced to 3 GB or less (depending on system configuration).
LAN	Built-in 10/100/1000 MBit/s Realtek RTL 8111CP	Built-in 10/100/1000 MBit/s Realtek RTL 8111CP
Audio codec	Realtek ALC663	Realtek ALC663
Audio features	High Definition Audio	High Definition Audio
I/O controller on board		
Serial ATA total	6	6
thereof eSATA	1, optional	1, optional
SATA RAID support	0, 1, 10, 5	0, 1, 10, 5
Interfaces		
Audio: in (rear)	1	1
Audio: out / SPDIF (rear)	2 / 1	2 / 1
Front Audio: in	1	1
Front Audio: out	1	1
FireWire (IEEE1394) (front)	1	1
FireWire (IEEE1394) (rear)	1	1
Internal speakers	1	1
USB 2.0 total	11	11
USB front	2	2
USB rear	6	6
USB internal	3, thereof 1 type A	3, thereof 1 type A
Serial (RS-232)	1	1
Mouse / Keyboard (PS/2)	1 / 1	1 / 1
Ethernet (RJ-45)	1	1
Parallel	Optional	Optional
Drive bays		
Drive bays total	7	7
3.5-inch internal bays	4	4
5.25-inch external bays	3	3

Slots		
PCI-Express Gen2 x16	2 x (312 mm) full height	2 x (312 mm) full height
PCI-Express Gen1 x4 (mech. x8)	1 x (312 mm) full height	1 x (312 mm) full height
PCI-Express Gen2 x4 (mech. x8)	1 x (312 mm) full height	1 x (312 mm) full height
PCI (32-bit / 33 MHz)	2 x (312 mm) full height	2 x (312 mm) full height
Electrical values		
Power consumption note	190 W depending on configuration	190 W depending on configuration
Rated voltage range	100 - 240 V	100 - 240 V
Rated frequency range	50 - 60 Hz	50 - 60 Hz
Max. output of power supply	500 W up to 85% efficiency	700 W up to 85% efficiency
Noise for standard configuration (HDD, ODD, FDD)		
Noise emission	According to ISO9296 (LpAm at bystander position)	According to ISO9296 (LpAm at bystander position)
Idle mode	23 dB(A)	23 dB(A)
Office mode	23 dB(A)	23 dB(A)
Noise notes / description	depending on configuration	depending on configuration
Dimensions / Weight / Environmental		
Dimension (W x D x H)	215 x 522 x 446 mm	215 x 522 x 446 mm
Operating position	Vertical / horizontal	Vertical / horizontal
Weight	18 kg	18 kg
Weight notes	Weight may vary depending on actual configuration	Weight may vary depending on actual configuration
Operating ambient temperature	15 - 35°C	15 - 35°C
Operating relative humidity	20 - 75 %	20 - 75 %
Compliance		
Product	CELSIUS M470	CELSIUS M470 power
Model	MCS-D2778	MCS-D2778
Germany	GS depending on configuration Blauer Engel / Blue Angel	GS depending on configuration
Europe	CE	CE
USA/Canada	FCC Class B CSA c	FCC Class B CSA c
Global	RoHS (Restriction of hazardous substances) IEC60601-1-2 in combination with medical kit ENERGY STAR® 5.0 (depending on configuration)	RoHS (Restriction of hazardous substances) IEC60601-1-2 in combination with medical kit ENERGY STAR® 5.0 (depending on configuration)
China	CCC	CCC
Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx	https://sp.ts.fujitsu.com/sites/certificates/default.aspx
Security		
Physical security	Kensington Lock support Eye for padlock Seal option Intrusion switch Optional: Integrated cabinet lock	Kensington Lock support Eye for padlock Seal option Intrusion switch Optional: Integrated cabinet lock
System security	Write protect option for the Flash EPROM Boot protection for floppy disk / CD drive and write protection for floppy disk drive	Write protect option for the Flash EPROM Boot protection for floppy disk / CD drive and write protection for floppy disk drive
User security	Optional: Access protection via internal SmartCard reader User and supervisor BIOS password Optional: SmartCase Logon+	Optional: Access protection via internal SmartCard reader User and supervisor BIOS password Optional: SmartCase Logon+
Operating system		
Operating system optional preinstalled	Microsoft® Windows Vista® Business 64bit Microsoft® Windows Vista® Business 32bit	Microsoft® Windows Vista® Business 64bit Microsoft® Windows Vista® Business 32bit

Operating system		
Operating system compatible	Microsoft® Windows® XP Professional x64 Edition Microsoft® Windows® XP Professional Linux	Microsoft® Windows® XP Professional x64 Edition Microsoft® Windows® XP Professional Linux
Operating system notes	RedHat / Novell certification pending For some configurations third party drivers are currently not available or configuration restrictions may apply.	RedHat / Novell certification pending For some configurations third party drivers are currently not available or configuration restrictions may apply.
Additional Software		
Additional software (optional)	Drivers & Utlities DVD (DUDVD) Windows Vista® & XP CyberLink PowerDVD 7 Nero 8 Essentials XL Recovery DVD (Windows Vista®) Windows® XP 32 downgrade pack Windows® XP 64 downgrade pack	Drivers & Utlities DVD (DUDVD) Windows Vista® & XP CyberLink PowerDVD 7 Nero 8 Essentials XL Recovery DVD (Windows Vista®) Windows® XP 32 downgrade pack Windows® XP 64 downgrade pack
	Keyboard on (Fujitsu keyboard required) Thermal management	Keyboard on (Fujitsu keyboard required) Thermal management
Spare part availability	5 years	5 years
Manageability		
Manageability type	DeskView 10	DeskView 10
Manageability link	http://ts.fujitsu.com/manageability	http://ts.fujitsu.com/manageability
Input device / components		
	Optical USB tilt wheel mouse	Optical USB tilt wheel mouse
Input devices (optional)	Optical USB/PS2 tilt wheel mouse Space Explorer USB Space Navigator USB Space Pilot USB Keyboard	Optical USB/PS2 tilt wheel mouse Space Explorer USB Space Navigator USB Space Pilot USB Keyboard

Warranty
Maintenance and Support Services - the perfect extension

Recommended Service	5x9, Response Time: Next Business Day
Service Weblink	http://ts.fujitsu.com/Supportservice

Information about environmental care, policies, programs and our Environmental Guideline FSC 03230:
http://ts.fujitsu.com/aboutus
Take back and Recycling information:
http://ts.fujitsu.com/recycling

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